DETAILED ACTION

1.   No new claims are added. Claims 9, 16, and 24 are cancelled. Claims 1-8, 10-15, 17-23,

and 25-27 are pending in this office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

1.   Claims 1-8, 10-12, 15, and 17-27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent Number 6,092,178 issued to Anita Jindal et al. (hereinafter

"Jindal") in further view of U.S. Patent Application Publication Number 2005/0149531 issued to

Sunil K. Srivastava (hereinafter "Srivastava").

Claim 1:

Jindal discloses a method of providing a service to a client from one of a plurality of

servers in a server farm *(Jindal: Fig. 1 and abstract)*, each of the servers arranged to provide the

service to the client *(Jindal: Fig. 1 and abstract)*, each of the servers being associated with a service

address common to all of the servers *(Jindal: Fig. 1 and abstract and column 5, lines 48-57 and column 7,

lines 1-9)*, and the servers communicating with one another so as to update identity and status

information stored at each of the servers relating to each of the servers in the server farm *(Jindal:

column 7, lines 30-38 and column 8, lines 30-36)*, the method comprising the steps of:

receiving, at a DNS system, a request for the service from the client, the request

specifying the common service address *(Jindal: column 5, lines 48-52 and column 5, lines 58-59 and*

column 7, lines 1-9 and Fig. 1);

in response to the request, applying a load balancing method to select a first one of the

plurality of servers in the server farm and connecting the client to the selected first one of the

plurality of servers in the server farm *(Jindal: column 6, lines 33-43 and column 7, lines 1-9 and column 8,*

lines 30-47 and Fig. 1; The client is first connected to the DNS server. Then the DNS server connects the client to

the "preferred" server. The "preferred server" is the "first one of the plurality of servers" which the client is

connected.);

receiving the identity and status information relating to each of the plurality of servers in

the server farm, from the selected first one of the plurality of servers in the server farm to which

the client is connected *(Jindal: column 6, lines 33-63 and column 7, lines 19-26 and column 7, lines 30-38 and*

column 8, lines 30-36); and

selecting one of the plurality of servers in the server farm as the server to be used to

provide the service to the client, based on the received information *(Jindal: column 7, lines 2-5 and*

column 8, lines 30-47).

Jindal does not explicitly disclose wherein the receiving of information identifying each

of a plurality of servers from the server to which the client is connected and selecting one of the

plurality of servers to be used to provide the service to the client occurs _at the client_. However,

Jindal does suggest that the receiving of information and selecting of the server can occur at

another computer system separate from the DNS server *(Jindal: column 7, lines 17-18; The "trigger" is*

executable code that causes the retrieval of the server information from multiple servers and then causes analysis of

this retrieved information in order to choose a server. Since the trigger can be located at another computer system

(different system than the DNS Server) the actions the trigger produces must also be able to occur at locations other

than the DNS server.).

Furthermore, Srivastava discloses receiving information identifying each of a plurality of

servers from the server to which the client is connected and selecting one of the plurality of

servers to be used to used to provide the service to the client occurs <u>*at the client*</u> *(Srivastava:*

paragraph [0005], lines 8-11).

It would have been obvious to one of ordinary skill in the art the time the invention was

made to modify the invention of Jindal with the teachings of Srivastava noted above for the

purpose of receiving information identifying each of the plurality of servers from the server to

which the client is connected and selecting one of the plurality of servers as the server to be used

to provide the service to the client *(Srivastava: paragraph [0005], lines 8-11).* The skilled artisan would

have been motivated to improve the invention of Jindal per the above such that the gathered

server description information can be used to assist the client in selecting a server *(Srivastava:*

paragraph [0005], lines 8-11).

Claim 2:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted

above, and Jindal further discloses information relating to the status of each of the plurality of

servers *(Jindal: column 6, lines 44-50; Note specifically 'operational status (e.g., whether it is up or down).').*

Jindal does not explicitly disclose the step of providing the client with this information. The

applicant's purpose of providing the client with this information is so that the client can select a

certain server from a plurality of servers *(Applicant's Specification: paragraph [0006]).*

However, Srivastava discloses the step of providing the client with information about a plurality of servers *(Srivastava: paragraph [0005], lines 8-11)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the teachings of Jindal with the further teachings of Srivastava noted above for the purpose of providing the client with information about a plurality of servers *(Srivastava: paragraph [0005], lines 8-11)*. The skilled artisan would have been motivated to improve the teachings of Jindal as noted above for the purpose of sending server information to a client concerning a plurality of servers that may assist the client in choosing a particular server *(Srivastava: paragraph [0005], lines 8-11)*.

Claim 3:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted above, and Jindal further discloses information relating to the number of users being served by each of the plurality of servers *(Jindal: column 6, lines 44-50; Note specifically 'the number of clients connected.')*. Jindal does not explicitly disclose the step of providing the client with this information. The applicant's purpose of providing the client with this information is so that the client can select a certain server from a plurality of servers *(Applicant's Specification: paragraph [0006])*.

However, Srivastava discloses the step of providing the client with information about a plurality of servers *(Srivastava: paragraph [0005], lines 8-11)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the teachings of Jindal with the further teachings of Srivastava noted above for the purpose of providing the client with information about a plurality of servers *(Srivastava: paragraph [0005], lines 8-11)*. The skilled artisan would have been motivated to improve the teachings of Jindal as noted above for the

purpose of sending server information to a client concerning a plurality of servers that may assist

the client in choosing a particular server *(Srivastava: paragraph [0005], lines 8-11)*.

Claim 4:

The combination of Jindal and Srivastava discloses all the elements of claim 3, as noted

above, and Jindal further discloses wherein the step of selecting a second server includes

selecting the server in dependence on the number of users being served by each of the plurality

of servers *(Jindal: column 6, lines 33-36 and column 6, lines 44-50; The first reference shows that information is*

collected and analyzed to determine choosing a 'preferred server.' The second reference shows that the information

that is analyzed contains the number of users connected to a server. So the selection of a server is dependent on the

number of connected users.).

Claim 5:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted

above, and Jindal further discloses information relating to a grouping to which each of the

plurality of servers belong *(Jindal: column 11, lines 23-35)*. Jindal does not explicitly disclose

supplying the user with this information. The applicant's purpose of providing the client with

this information is so that the client can select a certain server from a plurality of servers

(Applicant's Specification: paragraph [0006]).

However, Srivastava discloses the step of providing the client with information about a

plurality of servers *(Srivastava: paragraph [0005], lines 8-11)*. It would have been obvious to one of

ordinary skill in the art at the time the invention was made to further modify the teachings of

Jindal with the further teachings of Srivastava noted above for the purpose of providing the client

with information about a plurality of servers *(Srivastava: paragraph [0005], lines 8-11)*. The skilled

artisan would have been motivated to improve the teachings of Jindal as noted above for the

purpose of sending server information to a client concerning a plurality of servers that may assist

the client in choosing a particular server *(Srivastava: paragraph [0005], lines 8-11).*

Claim 6:

The combination of Jindal and Srivastava discloses all the elements of claim 5, as noted

above, and Jindal further discloses including selecting the server in dependence on the grouping

(Jindal: column 11, lines 23-35).

Claim 7:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted

above, and Jindal further discloses wherein the step of selecting a server comprises randomly

selecting a server *(Jindal: column 2, lines 14-17).*

Claim 8:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted

above, and Jindal further discloses routing the client request to one of the plurality of servers

using a DNS round-robin algorithm *(Jindal: column 1, lines 45-48).*

Claim 10:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted

above, and Jindal further discloses including the step of communicating said identify and status

information between the servers in real-time *(Jindal: column 7, lines 30-38 and column 3, lines 50-54 and*

column 8, lines 30-47; The first reference discloses how the trigger gathers information from a plurality of servers.

The second reference shows that the triggers conduct real-time interrogations (queries) of application servers.).

Claim 11:

The combination of Jindal and Srivastava discloses all the elements of claim 10, as noted above, and Jindal further discloses wherein the information includes information defining the number of users connected to each of the servers *(Jindal: column 6, lines 44-50; Note specifically 'number of clients connected.')*, and grouping information for each of the servers *(Jindal: column 11, lines 23-35)*.

Claim 12:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted above, and Jindal further discloses a method further comprising requesting a connection to the selected second server *(Jindal: column 2, lines 2-7 and column 5, lines 19-25)*.

Claim 15:

Jindal discloses a client for use in a client-server system, the client being arranged to:

request a service, the request specifying a service address common to all of a plurality of servers in a server farm *(Jindal: Fig. 1 and abstract and column 5, lines 48-57 and column 7, lines 1-9)*, each of the plurality of servers arranged to provide the service to the client *(Jindal: Fig. 1 and abstract)* and the servers communicating with one another so as to update identity and status information stored at each of the servers relating to each of the servers in the server farm *(Jindal: column 7, lines 30-38 and column 8, lines 30-36)* *(Jindal: column 5, lines 48-52 and column 5, lines 58-59 and column 7, lines 1-9 and Fig. 1)*;

connect to a first one of the plurality of servers in the server farm selected according to a load balancing method *(Jindal: column 6, lines 33-43 and column 8, lines 30-47; The client is connected to the "preferred" server.)*;

receive the identity and status information relating to each of the servers in the server farm, from the selected first server in the server farm to which the client is connected, said information identifying each of the plurality of servers *(Jindal: column 2, lines 47-50 and column 6, lines 33-63 and column 7, lines 19-26 and column 7, lines 30-38 and column 8, lines 30-36)*; and

select a second one of the plurality of servers in the server farm as the server to be used to provide the service to the client, based on received information *(Jindal: column 7, lines 2-5 and column 8, lines 30-47)*.

Jindal does not explicitly disclose wherein said received information identifying each of the plurality of servers; and select one of the plurality of servers as the server to be used to provide the service to the client. However, Srivastava discloses wherein said information identifying each of the plurality of servers *(Srivastava: paragraph [0005], lines 8-11)*; and select one of the plurality of servers as the server to be used to provide the service to the client *(Srivastava: paragraph [0005], lines 8-11)*.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Jindal with the teachings of Srivastava noted above for the purpose of using a client to receive information identifying each of a plurality of servers; and select one of the plurality of servers as the server to be used to provide the service to the client *(Srivastava: paragraph [0005], lines 8-11)*. The skilled artisan would have been motivated to improve the invention of Jindal per the above such that the gathered server description information can be used to assist the client in selecting a server *(Srivastava: paragraph [0005], lines 8-11)*.

Claim 17:

Claim 17 is rejected under the same reasons set forth in the rejection of claim 3.

Claim 18:

Claim 18 is rejected under the same reasons set forth in the rejection of claim 5.

Claim 19:

Claim 19 is rejected under the same reasons set forth in the rejection of claim 7.

Claim 20:

Claim 20 is rejected under the same reasons set forth in the rejection of claim 11.

Claim 21:

Claim 21 is rejected under the same reasons set forth in the rejections of claims 1 and 15.

Claim 22:

The combination of Jindal and Srivastava discloses all the elements of claim 21, as noted

above, and Jindal further discloses comprising a Real-Time Text Protocol server *(Jindal: column 3,*

lines 50-54; Since the triggers executed by the server transfer data in real time, the server must be a Real-Time Text

Protocol Server.).

Claim 23:

Claim 23 is rejected under the same reasons set forth in the rejection of claims 1 and 15.

Claim 25:

Claim 25 is rejected under the same reasons set forth in the rejection of claim 3.

Claim 26:

Claim 26 is rejected under the same reasons set forth in the rejection of claim 22.

Claim 27:

The combination of Jindal and Srivastava discloses all the elements of claim 23, as noted

above, and Jindal further discloses wherein the servers are operable to communicate in real-time

(Jindal: column 7, lines 30-38 and column 3, lines 50-54; The first reference discloses how the trigger gathers

information from a plurality of servers. The second reference shows that the triggers conduct real-time

interrogations (queries) of application servers.).

2.   Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jindal in

view of Srivastava and further in view of U.S. Patent Application Publication Number

2003/0149653 issued to Neill Penney (hereinafter "Penney").

Claim 13:

The combination of Jindal and Srivastava discloses all the elements of claim 12, as noted

above, but does not explicitly disclose in the event that the connection to the selected second

server fails, attempting to reconnect to the selected server. However, Penney discloses in the

event that the connection to the selected second server fails, attempting to reconnect to the

selected server *(Penney: paragraph [0026], lines 1-2)*. It would have been obvious to one of ordinary

skill in the art at the time the invention was made to modify the previously mentioned

combination with the teachings of Penney noted above. The skilled artisan would have been

motivated to improve the teachings of the previously mentioned combination per the above such

that the client would be granted a second chance to connect to the desired server resulting in

greater client satisfaction.

Claim 14:

The combination of Jindal, Srivastava, and Penney discloses all the elements of claim 13,

as noted above, and Srivastava further discloses in the event that the reconnection attempt fails,

re-requesting the service to obtain the identity and status information for servers in the server

farm configured to provide the service *(Srivastava: paragraph [0005], lines 8-11; This reference shows*

presenting server information to a client so that the client can choose a server to connect to. This is exactly what the

applicant is claiming here. A reconnection after a failed connection is still simply a connection. Therefore both the

reference and the claimed invention of the applicant both perform the same function of simply presenting server

information to the client in order to assist the client in choosing a server to connect to.).

Response to Arguments

Applicant Argues:

Applying the Examiner's reasoning to claim 1, as amended, that the DNS server of Jindal and/or Srivastava reads on both "a DNS system" and "a first one of the plurality of servers in the server farm" would require that a client connect to a DNS system which then uses a load balancing method to connect **to *itself*** in order to deliver status and identity information to the already connected client. Logically, such reading does not agree with the plain language of the claim, nor would one skilled in the art look to force a DNS server to connect itself in order to satisfy a client request.

Examiner Responds:

Examiner is not persuaded. It is noted that the Examiner has not, for the purpose of

constructing a rejection, relied on as a premise, the idea that a DNS system could use a load

balancing method to connect to itself.

Page 3, paragraph 2 of the Examiner's office action mailed 10/05/2007 clearly recited:

> The client is first connected to the DNS server. Then the DNS
> server connects the client to the "preferred" server. The
> "preferred server" is the "first one of the plurality of servers"
> which the client is connected.

The preceding portion reproduced from the Examiner's office action is an attempt to

further clarify the mappings of the Applicant's claims to the prior art of record. From this

summary, it is clear that the Examiner is mapping the "preferred server" of Jindal to the claimed

"first one of the plurality of servers."

Page 3, paragraph 3 of the Examiner's office action mailed 10/05/2007 recited that the

DNS server is the "the server to which the client is connected". However, this appears to be a

typographical error. This statement was intended to read the "preferred server" is "the server

to which the client is connected.

This clarification should help clarify the remaining portions of the office action.

Applicant Argues:

Jindal does not teach or suggest "receiving, at the client, the identity and status information relating to each
of the plurality of servers in the server farm, from **the selected first one of the plurality of servers** in the server
farm to which the client is connected," as recited in claim 1 as amended, and Srivastava does not supply the missing
limitation.

Neither Jindal nor Srivastava teach or suggest receiving information from the selected server of a server
farm. Therefore, the combination of Jindal/Srivastava does not render obvious that which is recited in claim 1, as
amended.

Examiner Responds:

Examiner is not persuaded. The Examiner asserts that Jindal discloses receiving the

identity and status information relating to each of the plurality of servers in the server farm,

from *the selected first one of the plurality of servers* in the server farm to which the client is

connected (Jindal: column 6, lines 33-63).

In the cited portion of the Jindal reference the identity and status information is collected

(Jindal: column 6, lines 44-54) to determine a "preferred server" (first server) (Jindal: column 6, lines

54-59). Furthermore, this identity and status information can be received at the DNS server, or a

system that is coupled to the DNS server (Jindal: column 6, lines 60-63).

As noted in the preceding rejection, Jindal does not explicitly teach wherein the status

information is received at the client. However, Jindal does suggest that the status and identity

information can be received at another computer system coupled to the DNS system (Jindal: column 6, liens 60-63). This suggestion opens the door to combine the teachings of Jidal with the teachings of Srivastava: paragraph [0005], lines 8-11 to render the Applicant's claim limitation obvious over the prior art of record.

Since it appears that each and every element of the Applicant's claimed invention is either disclosed or suggested by the prior art of record, the claims remain rejected under the reasons set forth in the preceding office action.

Applicant Argues:

Furthermore, once Jindal directs the request from the DNS server to the server to provide the service and the client is connected, the process described by Jindal ends as a load balanced connection has been established to the application the client has requested. (Please see abstract).
Therefore, Jindal does not teach or suggest "receiving, at the client, the identity and status information relating to each of the plurality of servers in the server farm, from the selected first server in the server farm to which the client is connected," as recited in claim 1, as amended.

Examiner Responds:

Examiner is not persuaded. The process described by Jindal does not end when a load balanced connection has been established. Jindal clearly recites that even after a connection is made, the system continues to identify preferred servers on a "periodic basis" (Jindal: column 6, lines 38-40).

Therefore, even after the client is connected to a preferred server, the invention of Jindal appears to periodically collect status and identity information (Jindal: column 6, lines 38-54) to identify a better "preferred server", and returns the results to the DNS server or other computer system coupled to the DNS server (Jindal: column 6, lines 60-62).

While Jindal does not explicitly disclose receiving this information <u>at the client</u>,

Srivastava paragraph [0005], lines 8-11 appears to provide this limitation. Again, as noted

above, the combination of Jindal and Srivastava discloses each and every element of the

Applicant's claimed invention. Therefore, the claims remain rejected under the reasons set forth

in the preceding office action.

Applicant Argues:

In addition, Srivastava does not teach or suggest "receiving, at the client, the identity and status information relating to each of the plurality of servers in the server farm, from the selected first server in the server farm to which the client is connected," as recited in claim 1, as amended.

Nor does it teach or suggest "selecting, at the client, a second one of the plurality of servers in the server farm as the server to be used to provide the service to the client, based on the received information," as recited in claim 1, as amended.

Examiner Responds:

Examiner is not persuaded. The Examiner did not cite the Srivastava reference as

disclosing all of the claim limitations argued above. The Examiner has cited the Srivastava

reference for the sole purpose of disclosing a user on the client side receiving information

(server preferences) to aid a user in selecting a preferred server (Srivastava: paragraph [0005],

lines 8-11).

The rest of the remaining limitations argued above appear to be disclosed by the Jindal

reference, and those limitations have been adequately mapped to the prior art in the preceding

office action.

Since it appears that each and every element of the Applicant's claimed invention is

either disclosed or suggested by the prior art of record, the claims remain rejected under the

reasons set forth in the preceding office action.

Applicant Argues:

When fairly read, Srivastava only suggests using weight values in server records, which does not teach or suggest "status and identity information" as recited in claim 1. The Examiner admits that none of the processing disclosed in Jindal occurs at the client and relies on Srivastava to supply the missing teachings. As Srivastava discloses only using a "weighted approach" even the combination of Jindal/Srivastava fails to teach or suggest claim 1.

Examiner Responds:

Examiner is not persuaded. The Examiner did not cite the portion of Srivastava relied upon by the Applicant above. **The Examiner cited Srivastava paragraph [0005], lines 8-11**, not paragraph [0005], lines 8-13.

The cited portion of Srivastava recites "DNS enables a client to look up available servers to a particular protocol, **and can return server preferences that may assist in selecting a particular server**" (Srivastava: paragraph [0005], lines 8-11).

It is clear from the portion of Srivastava cited above that a user on the client side is presented with "server preferences" that aid in selecting a particular server. Jindal teaches wherein the information received is "status and identity information (Jindal: column 6, lines 44-62).

And, it appears that the combination of Jindal and Srivastava discloses each and every element of the Applicant's claimed invention. The claims remain rejected under the reasons set forth in the preceding office action.

Applicant Argues:

Moreover, Srivastava appears to teach away from the combination proposed by the Examiner. As Srivastava describes in the background, "although this approach is workable, when a plurality of servers is organized in a server farm that is distributed over numerous logically or geographically separate sites, the past approach becomes inefficient." (para. 0004). Srivastava criticizes conventional approaches of load balancing in the context of

high demand content networks and criticizes past approaches for failing to provide "stickiness" (See para. 0012 and 0024). Thus, Srivastava teaches away from using past load balancing approaches, one skilled in the art would not look to combine Srivastava and Jindal. Thus the combination proposed by the Examiner is improper.

Examiner Responds:

Examiner is not persuaded. The Examiner has only cited the Srivastava reference for the purpose of presenting the user on the client side with options to select a server based upon returned server preferences.

While the background of Srivastava does recite that existing (at the time the Srivastava patent application was filed) load-balancing methods are inefficient, the methods referred to by Srivastava are not relied upon in the prior art rejection given by the Examiner. Such methods comprise routing requests on a hop-by-hop basis across a widely distributed network (Srivastava: paragraphs [0004] – [0005]). It does not appear that an assertion is made by Srivastava that presenting the user with the ability to select a specific server based upon returned server preferences is inefficient.

In light of the comments above, it appears that the Srivastava does not teach away from the combination proposed by the Examiner. Therefore, the claims remain rejected under the reasons set forth in the preceding office action.

Examiner Notes:

All remaining arguments presented by the Applicant were simply a rephrasing or regurgitation of the arguments presented above. Therefore, all arguments set forth by the Applicant appear to be adequately refuted. If any part of the Examiner's position conveyed in the preceding office action is unclear, the Examiner urges the Applicant to contact the Examiner

to set up an interview so that all unclear issues regarding the instant application can be properly

clarified.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Patrick A. Darno whose telephone number is (571) 272-0788.

The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wilson Lee/   /Patrick A. Darno/
Primary Examiner, Art Unit 2163   Examiner
                                                           Art Unit 2163
                                                           06-09-2008

PAD